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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,872	12/13/2000	Yigal Katzir	140/01667	9284

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT PAPER NUMBER

2863

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/735,872

Applicant(s)

KATZIR ET AL.

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2003 and 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 and 61-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-54 is/are allowed.
- 6) ☒ Claim(s) 1-48 and 61-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2-21-03, 2-6-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The Amendment filed on May 28, 2003 has been acknowledged.

#### ***Request for Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 23, 2004 has been entered.

#### ***Withdrawal of Allowability***

2. The indicated allowability of claims 61-70 is withdrawn in view of the newly discovered reference(s) to Katzir et al. (US 6,275,514) and Caprara et al. (US 6,574,255). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation recited in claims 1, 5, 26, and 29, "... modulates at a data rate that is higher than a pulse repetition rate **of a modulated pulsed light**" is not described in the original disclosure.

Claims 1-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not explain how to modulate a pulsed light at a certain data rate and obtain a modulated pulse light at a lower repetition rate. It seems that the data rate of the modulator should be equal to the repetition rate of the modulated light.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2863

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 61-67, 69, and 70 are rejected under 35 U.S.C. 102(e) as being anticipated by Katzir et al. (US 6,275,514).

Regarding claim 61, Katzir et al. discloses an apparatus (Fig. 1) for recording an image on a photosensitive surface (35), comprising:

- a pulsed light source (18) that produces pulsed light (20) having a first wavelength and a pulsed repetition rate (Fig. 1);
- a wavelength converter (column 16, line 23) external to the pulsed light source that receives said pulsed light and outputs wavelength converted pulsed light having a second wavelength which is less than the first wavelength (column 16, lines 23-26);
- a modulator that receives and modulates the wavelength converted pulsed light (column 16, lines 27-28);

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- a scanner that scans the modulated wavelength converted pulsed light over the surface (column 16, lines 29-31).

Regarding claim 62, Katzir et al. discloses that the pulsed light source is a laser (column 3, lines 12-13).

Regarding claim 63, Katzir et al. discloses that the pulsed light has a first wavelength in the IR spectrum (column 6, lines 50-53).

Regarding claim 64, Katzir et al. discloses that the wavelength converter is a non-linear medium (column 2, lines 52-54).

Regarding claim 65, Katzir et al. discloses that the pulsed light source comprises a laser cavity and the non-linear medium is external to the laser cavity (column 16, lines 23-24).

Regarding claims 66 and 67, Katzir et al. discloses that the wavelength converted pulsed light has a wavelength which is in the UV spectrum (column 6, lines 53-55).

Regarding claim 69, Katzir et al. discloses that the pulsed repetition rate is less than a data rate at which said modulator modulates said pulsed light (column 2, lines 45-46).

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Regarding claim 70, Katzir et al. discloses that the pulse repetition rate is multiplied by a pulse repetition rate multiplier (column 3, lines 41-44).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katzir et al. in view of Caprara et al. (US 6,574,255).

Katzir et al. discloses the claimed limitations as discussed above except the non-linear medium is an LBO crystal for the purpose of doubling the frequency of laser.

Nevertheless, Caprara et al. discloses that the non-linear medium is an LBO crystal (column 3, lines 57-59) for the purpose of doubling the frequency of the laser.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Katzir et al. with an LBO crystal as disclosed by Caprara et al. for the purpose of doubling the frequency of the laser.

***Allowable Subject Matter***

6. Claims 49-54 are allowed.

***Reasons For Allowance***

7. The combination as claimed wherein a modulating signal responsive to the data signals for a time period longer than said time interval, such that the modulating signal is operative to modulate at least two successive pulses and wherein an attribute of the modulating signal changes between at least some of the two successive pulses (claim 49) is not disclosed, suggested, or made obvious by the prior art of record.

***Response to Amendment***

8. The amendment filed on May 28, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: claims 1, 5, 26, and 29, "... modulates at a data rate that is higher than a pulse repetition rate **of a modulated pulsed light**".

Applicant is required to cancel the new matter in the reply to this Office Action.



***Response to Arguments***

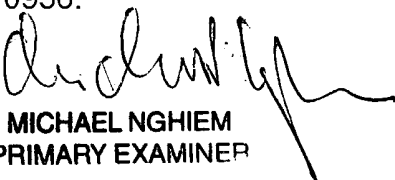
9. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2272. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (571) 272-2269. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
**MICHAEL NGHIEM**  
**PRIMARY EXAMINER**

Michael Nghiem

April 23, 2004